



OUSTAR® HERBICIDE

Version 2.0 / USA
102000030337

1/11
Revision Date: 09/01/2015
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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name OUSTAR® HERBICIDE

Product code (UVP) 84060348

SDS Number 102000030337

EPA Registration No. 432-1553

Relevant identified uses of the substance or mixture and uses advised against

Use Herbicide

Restrictions on use See product label for restrictions.

Information on supplier

Supplier Bayer Environmental Science
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
United States

Responsible Department Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days) 1-800-334-7577

Product Information Telephone Number 1-800-331-2867

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200

Serious eye damage: Category 1

Acute toxicity(Oral): Category 4



Signal word: Danger

Hazard statements

Causes serious eye damage.

Harmful if swallowed.

Precautionary statements

Wear eye protection/face protection.

Wash thoroughly after handling.



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Do not eat, drink or smoke when using this product.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor/physician.
IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.
Rinse mouth.
Dispose of contents/container in accordance with local regulation.

Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Hexazinone	51235-04-2	63.2
SULFOMETURON METHYL	74222-97-2	11.8

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
Inhalation	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.
Skin contact	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.
Eye contact	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Most important symptoms and effects, both acute and delayed

Symptoms	To date no symptoms are known.
Indication of any immediate medical attention and special treatment needed	
Treatment	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.



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SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Water spray, Dry chemical, Foam, Carbon dioxide (CO₂)

Unsuitable None known.

Special hazards arising from the substance or mixture Dangerous gases are evolved in the event of a fire.

Advice for firefighters

Special protective equipment for fire-fighters Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

Further information Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Whenever possible, contain fire-fighting water by diking area with sand or earth.

Flash point not applicable

Autoignition temperature no data available

Lower explosion limit not applicable

Upper explosion limit not applicable

Explosivity no data available

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.

Reference to other sections Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.



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SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Ensure adequate ventilation. Handle and open container in a manner as to prevent spillage.

Hygiene measures Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.
Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Store in original container and out of the reach of children, preferably in a locked storage area. Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Hexazinone	51235-04-2	50ug/m3 (ST ESL)	07 2011	TX ESL
Hexazinone	51235-04-2	5ug/m3 (AN ESL)	07 2011	TX ESL
SULFOMETURON METHYL	74222-97-2	5 mg/m3 (TWA)	02 2012	ACGIH
SULFOMETURON METHYL	74222-97-2	50ug/m3 (ST ESL)	07 2011	TX ESL
SULFOMETURON METHYL	74222-97-2	5ug/m3 (AN ESL)	07 2011	TX ESL
SULFOMETURON METHYL	74222-97-2	3.5 mg/m3 (TWA PEL)	08 2010	US CA OEL
Lactose	64044-51-5	10ug/m3 (AN ESL)	07 2011	TX ESL
Lactose	64044-51-5	100ug/m3 (ST ESL)	07 2011	TX ESL
Barium sulfate (1:1) (Inhalable fraction.)	7727-43-7	5 mg/m3 (TWA)	02 2014	ACGIH
Barium sulfate (1:1) (Respirable.)	7727-43-7	5 mg/m3 (REL)	2010	NIOSH
Barium sulfate (1:1) (Total)	7727-43-7	10 mg/m3 (REL)	2010	NIOSH
Barium sulfate (1:1)	7727-43-7	5 mg/m3	02 2006	OSHA Z1



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(Respirable fraction.)		(PEL)		
Barium sulfate (1:1) (Total dust.)	7727-43-7	15 mg/m3 (PEL)	02 2006	OSHA Z1
Barium sulfate (1:1) (Respirable fraction.)	7727-43-7	5 mg/m3 (TWA)	1989	OSHA Z1A
Barium sulfate (1:1) (Total dust.)	7727-43-7	10 mg/m3 (TWA)	1989	OSHA Z1A
Barium sulfate (1:1) (Total dust.)	7727-43-7	10 mg/m3 (TWA)	06 2008	TN OEL
Barium sulfate (1:1) (Respirable fraction.)	7727-43-7	5 mg/m3 (TWA)	06 2008	TN OEL
Barium sulfate (1:1)	7727-43-7	50ug/m3 (ST ESL)	03 2014	TX ESL
Barium sulfate (1:1)	7727-43-7	5ug/m3 (AN ESL)	03 2014	TX ESL
Sodium benzoate	532-32-1	50ug/m3 (ST ESL)	03 2014	TX ESL
Sodium benzoate	532-32-1	5ug/m3 (AN ESL)	03 2014	TX ESL

Exposure controls

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection

When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Hand protection

Chemical resistant nitrile rubber gloves

Eye protection

Safety glasses with side-shields

Skin and body protection

Wear long-sleeved shirt and long pants and shoes plus socks.

General protective measures

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water.
Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white to light brown
Physical State	granular
Odor	slight
Odour Threshold	no data available
pH	8.0 at 1 % (as aqueous solution)



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Vapor Pressure	no data available
Vapor Density (Air = 1)	no data available
Density	ca. 0.62 g/ml
Bulk density	35 lb/ft ³
Evaporation rate	not applicable
Boiling Point	not applicable
Melting / Freezing Point	not applicable
Water solubility	dispersible
Minimum Ignition Energy	not applicable
Decomposition temperature	no data available
Partition coefficient: n-octanol/water	not applicable
Viscosity	not applicable
Flash point	not applicable
Autoignition temperature	no data available
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Explosivity	no data available

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Thermal decomposition	no data available
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	no data available
Incompatible materials	no data available
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION



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Exposure routes Eye contact, Skin contact, Ingestion, Inhalation

Immediate Effects

Eye Moderate eye irritation.

Skin May cause skin irritation.

Ingestion Harmful if swallowed.

Information on toxicological effects

Acute oral toxicity LD50 (female rat) 1,421 mg/kg
LD50 (male rat) 2,073 mg/kg

Acute inhalation toxicity ATE (rat) > 5.0 mg/l
Exposure time: 4 h
ATE – acute toxicity estimate

Acute dermal toxicity ATE > 5,000 mg/kg
ATE – acute toxicity estimate

Skin irritation Moderate skin irritation. (rabbit)

Eye irritation Irritating to eyes. (rabbit)
The information is derived from the properties of the individual components.

Sensitisation Non-sensitizing. (guinea pig)
The information is derived from the properties of the individual components.

ACGIH

SULFOMETURON METHYL 74222-97-2 Group A4

NTP

None.

IARC

None.

OSHA

None.

Further information

No further toxicological information is available.

SECTION 12: ECOLOGICAL INFORMATION

Chronic toxicity to fish Oncorhynchus mykiss (rainbow trout)
LC50: > 320 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient hexazinone.
Lepomis macrochirus (Bluegill sunfish)



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	<p>LC50: > 116 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient hexazinone.</p>
	<p>Oncorhynchus mykiss (rainbow trout) LC50: > 148 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient sulfometuron methyl.</p>
Chronic toxicity to aquatic invertebrates	<p>EC50 (Daphnia magna (Water flea)): 152 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient hexazinone.</p> <p>EC50 (Daphnia (water flea)): 150 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient sulfometuron methyl.</p>
Toxicity to aquatic plants	<p>ErC50 (Skeletonema costatum) 0.022 mg/l Exposure time: 120 h The value mentioned relates to the active ingredient hexazinone.</p> <p>NOEC (Skeletonema costatum) 0.0041 mg/l Exposure time: 120 h The value mentioned relates to the active ingredient hexazinone.</p> <p>EC50 (Raphidocelis subcapitata (freshwater green alga)) 0.0046 mg/l Exposure time: 120 h The value mentioned relates to the active ingredient sulfometuron methyl.</p>
Environmental precautions	<p>Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Drift or runoff from treated areas may adversely affect non-target plants. Apply this product as specified on the label.</p>

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product

Do not contaminate water, food, or feed by disposal.
Dispose of unused product by incineration at a licensed incineration plant, in accordance with all applicable national and local regulations.

Contaminated packaging

Consult state and local regulations regarding the proper disposal of container.
Follow advice on product label and/or leaflet.



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RCRA Information

Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORT INFORMATION

49CFR Not dangerous goods / not hazardous material

IMDG

UN number **3077**
Class **9**
Packaging group **III**
Marine pollutant **YES**
Proper shipping name **ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (HEXAZINONE, SULFOMETURON METHYL MIXTURE)**

IATA

UN number **3077**
Class **9**
Packaging group **III**
Environm. Hazardous Mark **YES**
Proper shipping name **ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (HEXAZINONE, SULFOMETURON METHYL MIXTURE)**

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 432-1553

US Federal Regulations

TSCA list

Hexazinone 51235-04-2

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

Hexazinone 51235-04-2

US States Regulatory Reporting

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause



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reproductive harm.

US State Right-To-Know Ingredients

Hexazinone 51235-04-2 NJ, RI

Canadian Regulations

Canadian Domestic Substance List

None.

Environmental

CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

EPA/FIFRA Information:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word: Danger!

Hazard statements: Corrosive - causes irreversible eye damage.
Harmful if swallowed.
Do not get in eyes or on clothing.
Wash thoroughly with soap and water after handling.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
CAS-Nr.	Chemical Abstracts Service number
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	US. IARC Monographs on Occupational Exposures to Chemical Agents
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
N.O.S.	Not otherwise specified
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

Bayer Environmental Science
SAFETY DATA SHEET



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NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 1 Instability - 0 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 2 Flammability - 1 Physical Hazard - 0 PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: New Safety Data Sheet.

Revision Date: 09/01/2015

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